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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,030	11/18/2003	Donald A. Anderson	091-0194	7340
27431	7590	02/24/2006	EXAMINER	
SHIMOKAJI & ASSOCIATES, P.C. 8911 RESEARCH DRIVE IRVINE, CA 92618			OMGBA, ESSAMA	
			ART UNIT	PAPER NUMBER
			3726	

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/717,030	ANDERSON ET AL.	
Examiner	Art Unit		
Essama Omgba	3726		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 05 December 2005.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-55 is/are pending in the application.  
4a) Of the above claim(s) 21-25 and 36-55 is/are withdrawn from consideration.

5)  Claim(s) 10-20 and 26-29 is/are allowed.

6)  Claim(s) 1,3,5-9 and 30-33 is/are rejected.

7)  Claim(s) 2,4,34 and 35 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/18/03 & 4/25/05.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_ .

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election without traverse of the invention of Group I, claims 1-20 and 26-35, in the reply filed on December 5, 2005 is acknowledged.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 5-9 and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by McCarville et al. (US Patent 5,968,445).

With regards to claim 1, McCarville et al. discloses a method of sealing a vacuum membrane to a surface 31, the method comprising defining a vacuum zone (the surface encompassed by element 50 in figure 2), placing a breather 38 over the surface within the vacuum zone, placing a membrane over the breather (non-labeled element over element 40 in figure 2), the membrane covering the vacuum zone, covering the vacuum zone with a laminate release surface 50 (col. 5, lines 56-67 and col. 6, lines 1-49).

Applicant should note that a vacuum seal is formed inside surface 50.

For claim 3, it is inherent that the breather will adhere to the surface.

For claims 5 and 6, see column 6, lines 46-49 and 59-61.

For claims 7-9, see column 5, lines 43-45 and figure 2.

For claims 30 and 31, McCarville et al. discloses a tool for manufacturing large aircraft parts, the tool comprising a mandrel 30 having a lay-up surface 31 and a vacuum zone with a low profile vacuum seal 50 at a boundary of the vacuum zone, see column 5, lines 31-45 and figure 2.

For claim 32, see column 6, lines 6-9.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Turner et al. (US Patent 5,651,850) in view of Koury (US Patent 6,073,670).

Turner et al. discloses a system for manufacturing large aircraft parts, the system comprising an automated tape laying machine (col. 2, lines 40-42) and a male mandrel 10 having a lay-up surface with a plurality of vacuum zones defined on the lay-up surface (col. 8, lines 1-9). Turner et al. does not disclose the tape laying machine including a multiple head machine. However Koury teaches a multiple head tape laying machine, see column 2, lines 36-53. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have substituted the single head tape laying machine of Turner et al. with the multiple head apparatus taught by Koury, in order to reduce the number of passes required to effect placement of the

fibers on the lay-up mandrel, thereby reducing overall production cost. Applicant should note that female cure tools are old and well known in the art.

***Allowable Subject Matter***

6. Claims 10-20 and 26-29 are allowed.
7. Claims 2, , 4, 34 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgbia whose telephone number is (571) 272-4532. The examiner can normally be reached on M-F 9-6:30, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Nguyen can be reached on (571) 272-4491. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Essama Omgbra  
Primary Examiner  
Art Unit 3726

eo  
February 19, 2006